Acer AL1521

Service Guide

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Conventions

The following conventions are used in this manual

:

`Screen messages`	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

WARNING: (FOR FCC CERTIFIED MODELS)

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

NOTICE:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibility of the user to correct such interference.

As an ENERGY STAR® Partner our company has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

WARNING:

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerously high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

PRECAUTIONS

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.
- Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V AC, Min. 3.5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.
- For use only with the attached power adapter (output 12V DC)which have **UL,CSA** listed license

SPECIAL NOTES ON LCD MONITORS

The following symptoms are normal with LCD monitor and do not indicate a problem.

NOTES

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.

- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.

Table of Contents

Monitor Features

	Driving system	TFT Color LCD
LCD Panel	Size	38cm(15")
	Pixel pitch	0.297mm(H) x 0.297mm(V)
	Viewable angle	120° (H) 100° (V)
	Brightness	250 cd/m2(typ.)
	Contrast Ratio	400:1(typ.)
	Response time	16ms
Input	Video	R,G,B Analog Interface (Analog-Only Model) Digital: DVI-D (Dual-Input Model)
	Separate Sync.	H/V TTL
	H-Frequency	30kHz – 60kHz
	V-Frequency	55-75Hz
Display Colors		16.2 million Colors
Dot Clock		80MHz
Max. Resolution		1024 x 768@75 Hz
Plug & Play		VESA DDC1/2B™
EPA ENERGY STAR®	ON Mode	≤25W
	OFF Mode	<3W
Audio output		Rated Power 1.0W rms (Per channel)
Input Connector		D-Sub 15pin DVI 24 pin (Dual-Input Model)
Input Video Signal		Analog:0.7Vp-p(standard),75 OHM, Positive (Analog-Only Model) Digital signal (Dual-Input Model)
Maximum Screen Size		Horizontal : 12.0”(304.1mm)
		Vertical : 9.0”(228.1mm)
Power Source		100~240VAC,50~60Hz
Environmental Considerations		Operating Temp: 5°C to 35°C Storage Temp.:-20°C to 60°C Operating Humidity : 10% to 90%
Weight (N. W.)		3.7kg
Dimension		338 (W) x 347 (H) x 154 (D)mm

External Controls:	Switch	• Power Switch • MENU/ ENTER • >/ Volume • </Volume • Auto Adjust Key
	Functions	• Contrast/brightness • Focus • Clock • H.Position • V.Position • Language • OSD Color temperature • OSD Position &Timeout • Auto Config • Input • Information • Reset • Exit
Regulatory Compliance		UL, CSA, FCC, TUV/GS, CE, TCO'99, ISO13406-2

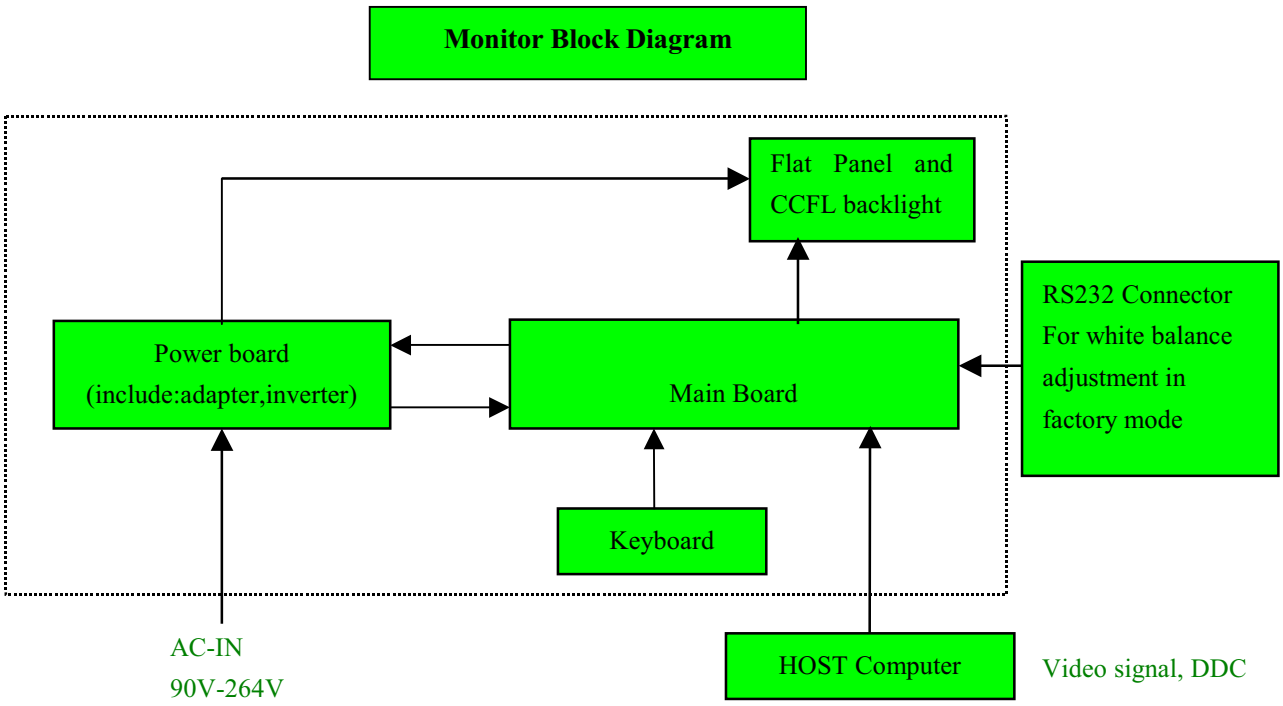
FACTORY PRESET TIMING TABLE

STANDARD	RESOLUTION	HORIZONTAL FREQUENCY (kHz)	VERTICAL FREQUENCY (Hz)
VGA	720 x 400	31.47	70.0
	640 × 480	31.47	60.0
	640 × 480	35.00	66.6
	640 × 480	37.50	75.0
	640 × 480	37.861	72.8
SVGA	800 × 600	35.156	56.3
	800 × 600	37.879	60.0
	800 × 600	48.077	72.2
	800 × 600	46.875	75.0
	832 x 624	49.725	75.0
XGA	1024 × 768	48.363	60.0
	1024 × 768	56.476	70.0
	1024 x 768	60.24	74.9
	1024 × 768	60.02	75.0

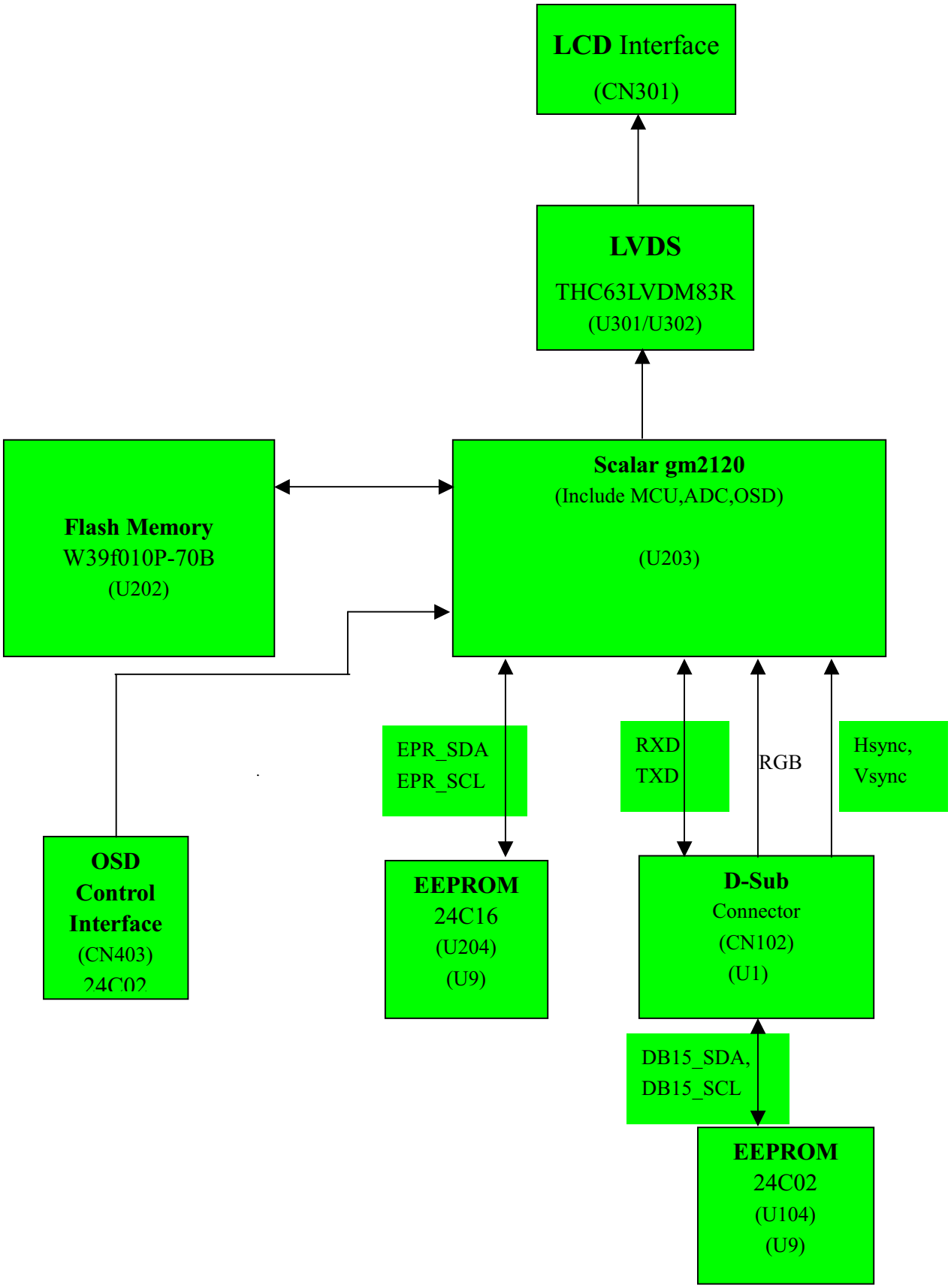
. IBM MODES, MAC MODEL

Monitor Block Diagram

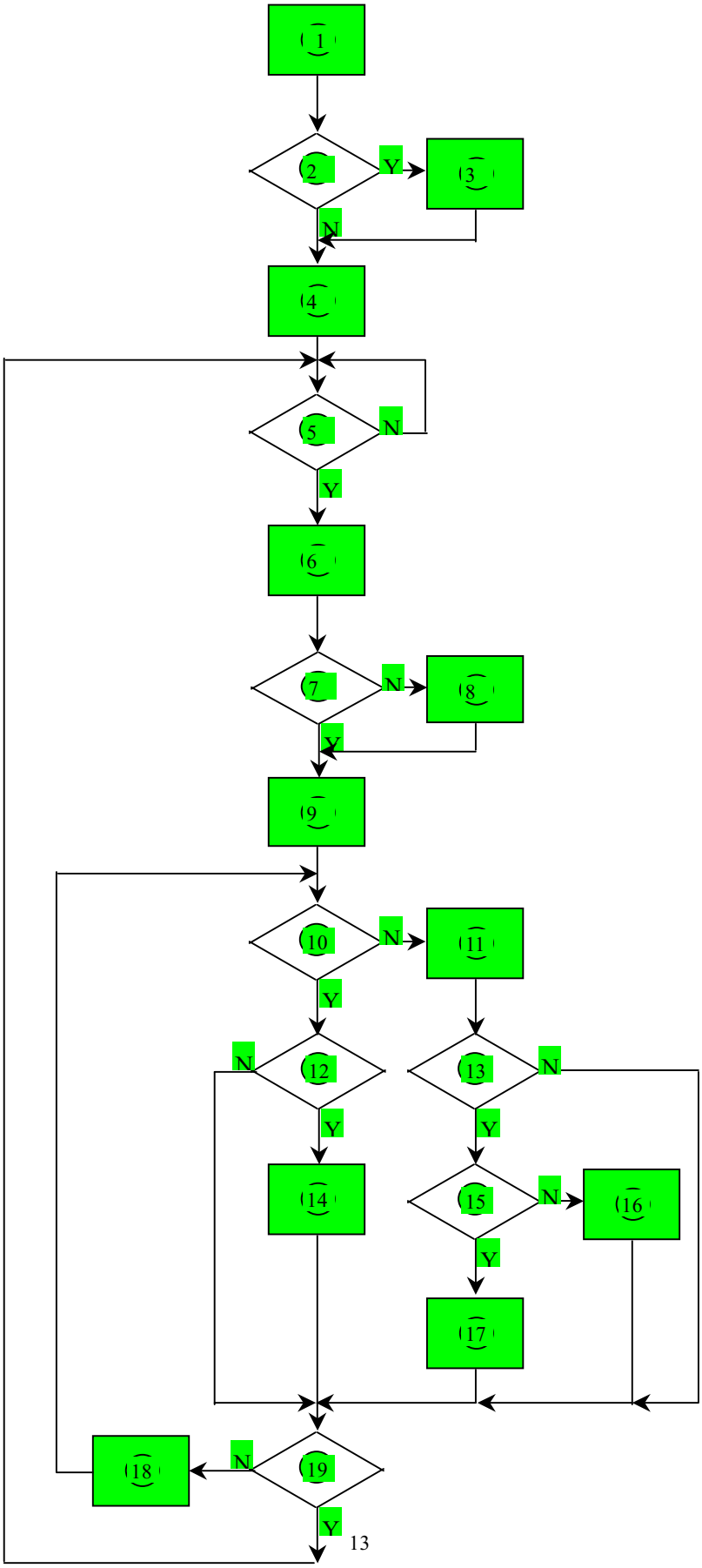
The LCD MONITOR will contain an main board, an inverter/power board, keypad board and internal adapter which house the flat panel control logic, brightness control logic and DDC.
The Inverter board will drive the backlight of panel and the DC-DC conversion.
The Adapter will provides the 12V DC-power to inverter/power board.



MAIN BOARD DIAGRAM



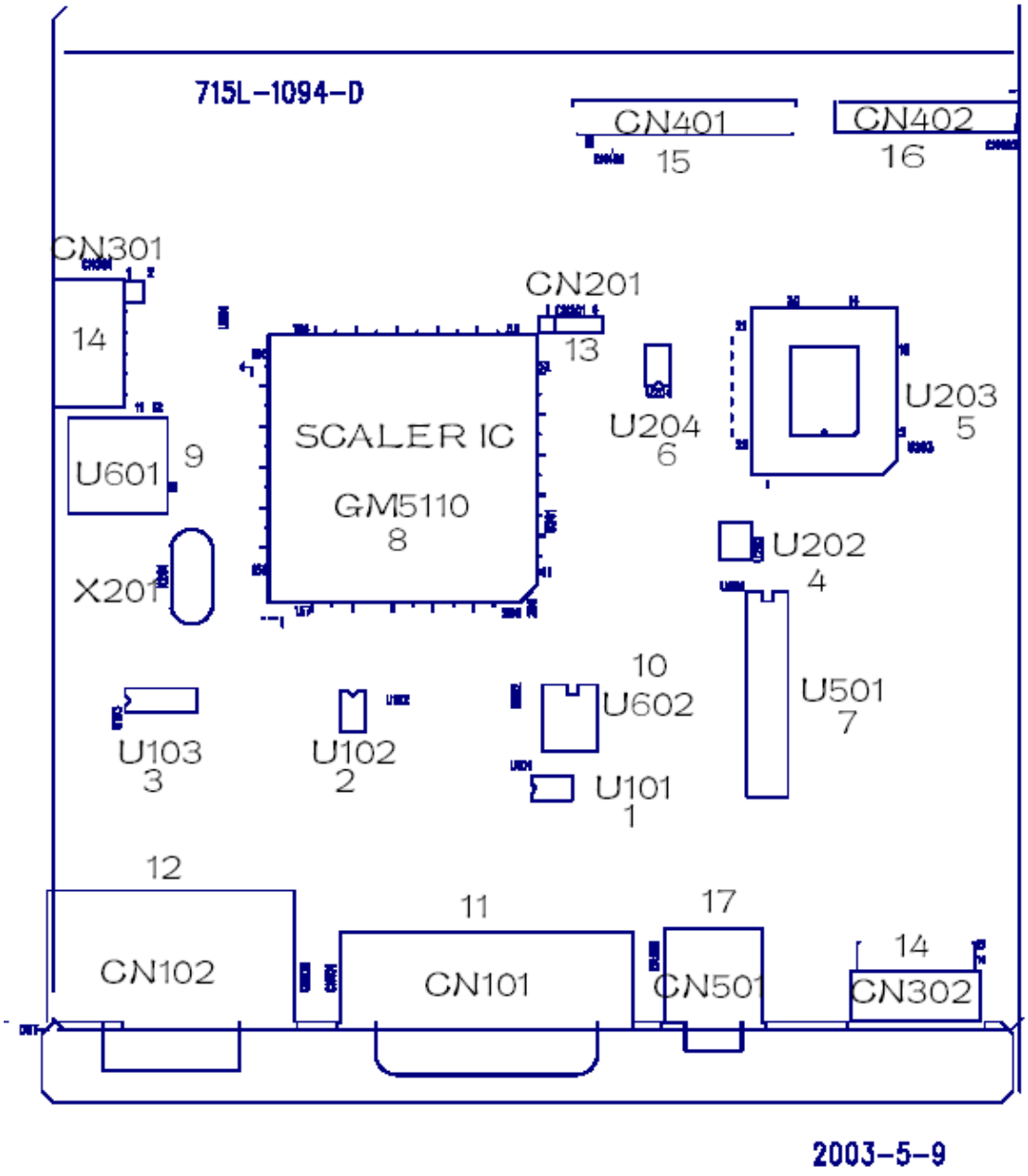
Software Flow Chart



Software Flow Chart

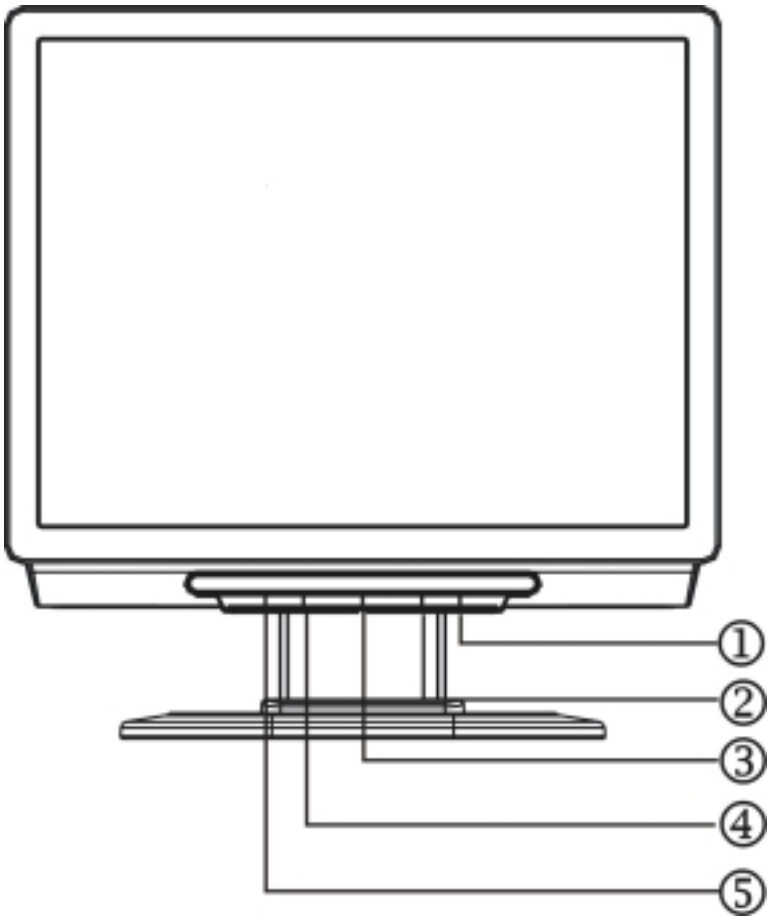
1) MCU initialize.
2) Is the eeprom blank ?
3) Program the eeprom by default values.
4) Get the PWM value of brightness from eeprom.
5) Is the power key pressed ?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed ?
8) Enter factory mode.
9) Save the power key status into eeprom.
Turn on the LED and set it to green color.
Scaler initialize.
10) In standby mode ?
11) Update the life time of back light.
12) Check the analog port, are there any signals coming ?
13) Does the scalar send out a interrupt request ?
14) Wake up the scalar.
15) Are there any signals coming from analog port ?
16) Display "No connection Check Signal Cable" message. And go into standby mode after the message disappear.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed ?

Monitor Board Layout



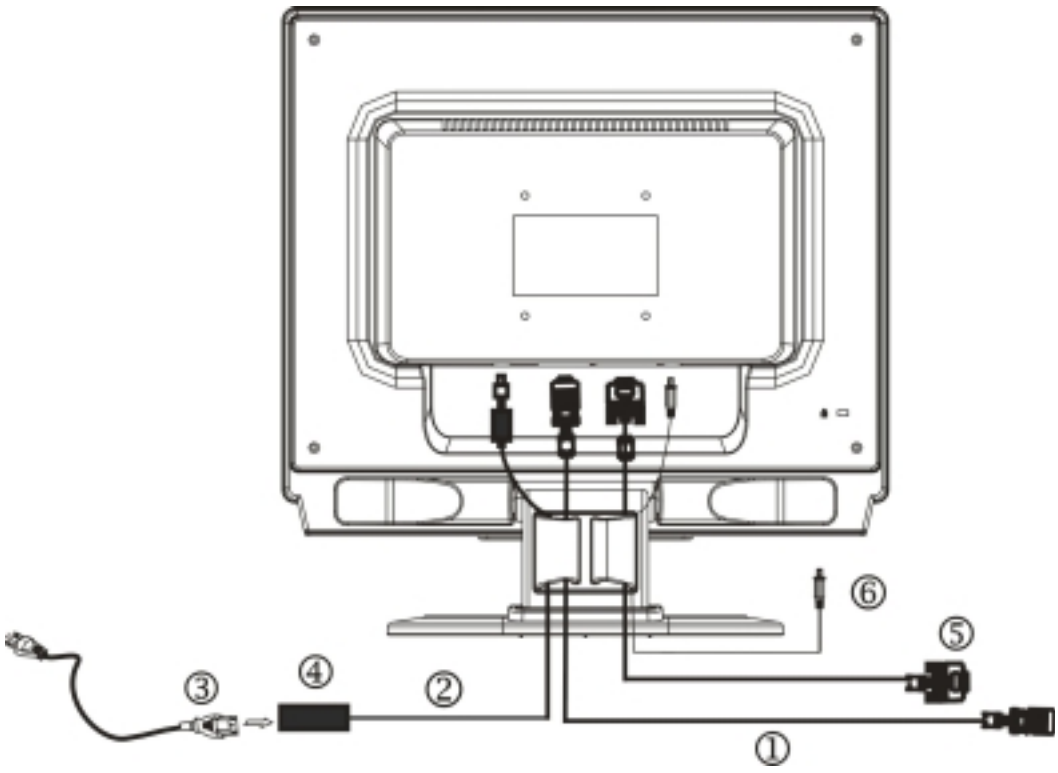
Label	Component
U101	M24C02-WMN6T SMT
U102	M24C02-WMN6T SMT
U103	74LVC14ADT
U201	GM5110
U202	
U203	CPU CONTROL IC
U204	M24C16-MN6T
U501	TDA7496L BY ST
U601	AIC1084CE SQ252AOI
U602	RT9164-25CG
CN101	DVID CONN 24P
CN102	D-VSB 15PIN
CN201	4 PIN
CN301	PIN HEADER FEMALE 2*
CN401	FH12-45S-0.5SH SMTP
CN402	WAFER FH12-30S-0.5SH
CN501	PHONE JACK
X201	CRYSTAL 14.318MHzHC-

Front Bezel



Item	Description
1	VEDIO （UP）
2	VEDIO （DOWM）
3	POWER
4	MENU/ENTER
5	AUTO/EXIT

Back Bezel



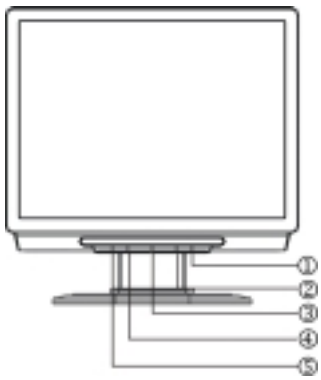
Item	Description
1	D-SUB LABLE
2	DC-Jack Power Cable
3	AC POWER CORD
4	EXTERNAL ADAPTER
5	DVI CABLE
6	AUDIO CABLE

Chapter 2

OPERATING INSTRUCTIONS

Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor position. The power indicator will light up.



External Control Button

EXTERNAL CONTROLS

1.	>/ Volume	4.	MENU/ENTER
2.	</ Volume	5.	Auto Adjust Key/Exit
3.	Power Key /LED		

FRONT PANEL CONTROL

- **Power Button:**
  Press this button to turn the monitor ON or OFF.

- **MENU / ENTER :**
  Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON or Exit OSD menu when in Volume Adjust OSD status.

- **<Volume:**
  Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or

adjust a function when function is activated.

- **>/Volume:**
  Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **Auto Adjust button / Exit:**
  1. When OSD menu is in active status, this button will act as EXIT-KEY
     (EXIT OSD menu).
  2. When OSD menu is in off status, press this button for 2 seconds to activate the Auto Adjustment function.
     The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus.

- **Power Indicator:**
  Green — Power On mode.
  Orange — Off mode.

NOTES

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.
- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

1. Press the MENU-button to activate the OSD window. See figure 4.
2. Press <or >to select the desired function. See figure 4.
3. Press the MENU-button to select the function that you want to adjust.
4. Press < or >to change the settings of the current function.
5. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-4.

ADJUSTING THE PICTURE

1.) Main OSD Menu :

a. Outline:

I. Analog-Only Model

II. Dual-Input Model, Analog Signal Input

III. Dual-Input Model, Digital Signal Input

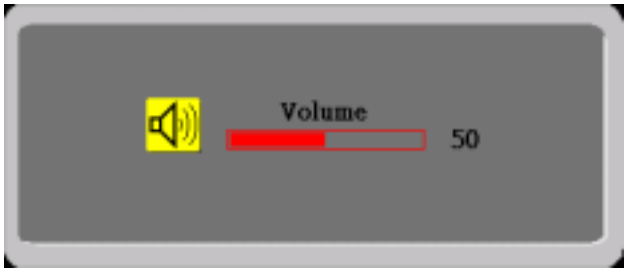
b. The description for control function :

Main Menu Icon	Sub Menu Item	Sub Menu Icon	Description	Adjustment Range	Reset Value
	Contrast		Contrast from Digital-register.	0-100	Recall Cool Contrast Value
	Brightness		Backlight Adjustment	0-100	Recall Cool Brightness Value
	Focus		Adjust Picture Phase to reduce Horizontal-Line noise	0-100	Do Auto Config
	Clock		Adjust picture Clock to reduce Vertical-Line noise.	0-100	Do Auto Config
	H. Position		Adjust the horizontal position of the picture.	0-100	Do Auto Config
	V. Position		Adjust the verticalposition of the picture.	0-100	Do Auto Config
	Warm	N/A	Recall Warm Color Temperature from EEPROM.	N/A	The Color Temperature will be set to Cool. The User R/G/B value(default is 100) will not be Modified by Reset function.
	Cool	N/A	Recall Cool Color Temperature from EEPROM.	N/A	
	User / Red		Red Gain from Digital-register.	0-100	
	User / Green		Green Gain Digital-register.	0-100	
	User / Blue		Blue Gain from Digital-register.	0-100	
	English	N/A	Set OSD display language to English.	N/A	The Language will be set to English.
	繁體中文	N/A	Set OSD display language to Tranditional Chinese.	N/A	
	Deutsch	N/A	Set OSD display language to German.	N/A	
	Français	N/A	Set OSD display language to French.	N/A	
	Español	N/A	Set OSD display language to Spain.	N/A	
	Italiano	N/A	Set OSD display language to Italian.	N/A	
	简体中文	N/A	Set OSD display language to Simplified Chinese.	N/A	
	日本語	N/A	Set OSD display language to Japanese.	N/A	
	H. Position		Adjust the horizontal position of the OSD.	0-100	50
	V. Position		Adjust the verticalposition of the OSD.	0-100	50
	OSD Timeout		Adjust the OSD timeout.	10-120	10
 (Analog-Only Model)	Auto Config	N/A	Auto Adjust the H/V Position, Focus and Clock of picture.	N/A	N/A

 (Dual-Input Model)	Analog	N/A	Select input signal from analog (D-Sub)	N/A	N/A
	Digital	N/A	Select input signal from digital (DVI)	N/A	N/A
	Information	N/A	Show the resolution, H/V frequency and input port of current iput timing.	N/A	N/A
	Reset	N/A	Clear each old status of Auto-configuration and set the color temperature to Cool.	N/A	N/A
	Exit	N/A	Exit OSD	N/A	N/A

2.) Hot-Key Menu:

a. Outline:



b. The description for Hot-Key function :

Item	Operation	Icon	Description	Adjustment Range	Reset Value
Volume	When the OSD is closed, press Left or Right button will be Volume Hot-Key Function		Volume of Audio adjustment. The Audio will be Mute when volume=0.	0-100	50

3.) OSD Message:

a. Outline:

b. The description for OSD Message :

Item	Description
Auto Config Please Wait	1.) When Analog signal input, if User Press Hot-Key “Auto”, will show this message, and the monitor do the auto config function. 2.) When Digital signal input, without this OSD Message.
Input Not Supported	When the Hsync Frequency, Vsync Frequency or Resolution is out of the monitor support range, will show this message. This message will be flying.
Cable Not Connected	1.) Analog-Only Model : When the video cable is not connected, will show this message. This message will be flying. 2.) Dual-Input Model : Dual-Input Model without this OSD Message.
No Signal	1.) Analog-Only Model : When the video cable is connected, but there is no active signal input, will show this message, then enter power saving. 2.) Dual-Input Model : When the video cable is not connected, or the video cable is connected but there is no active signal input, will show this message, then enter power saving.

4.) LOGO:

When the monitor is power on, the LOGO will be showed in the center, and disappear slowly.

HOW TO OPTIMIZE THE DOS-MODE

PLUG AND PLAY

Plug & Play DDC1/2B Feature

This monitor is equipped with VESA DDC1/2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities. The communication channel is defined in two levels, DDC1 and DDC2B.
The DDC1 is a unidirectional data channel from the display to the host that continuously transmits EDID information. The DDC2B is a bidirectional data channel based on the I²C protocol. The host can request EDID information over the DDC2B channel.

THIS MONITOR WILL APPEAR TO BE NON-FUNCTIONAL IF THERE IS NO VIDEO INPUT SIGNAL. IN ORDER FOR THIS MONITOR TO OPERATE PROPERLY, THERE MUST BE A VIDEO INPUT SIGNAL.

This monitor meets the Green monitor standards as set by the Video Electronics Standards Association (VESA) and/or the United States Environmental Protection Agency (EPA) and The Swedish Confederation Employees (NUTEK). This feature is designed to conserve electrical energy by reducing power consumption when there is no video-input signal present. When there is no video input signal this monitor, following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. The display is restored by pressing a key on the keyboard, or clicking the mouse.

USING THE RIGHT POWER CORD

The accessory power cord for the Northern American region is the wallet plug with NEMA 5-15 style and is UL listed and CSA labeled. The voltage rating for the power cord shall be 125 volts AC.
Supplied with units intended for connection to power outlet of personal computer: Please use a cord set consisting of a minimum No. 18 AWG, type SJT or SVT three conductors flexible cord. One end terminates with a grounding type attachment

plug, rated 10A, 250V, CEE-22 male configuration. The other end terminates with a molded-on type connector body, rated 10A, 250V, having standard CEE-22 female configuration.

Please note that power supply cord needs to use VDE 0602, 0625, 0821 approval power cord in European counties.

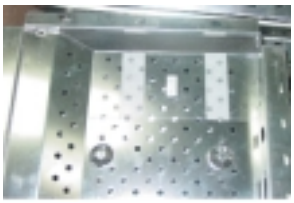
Machine assembly

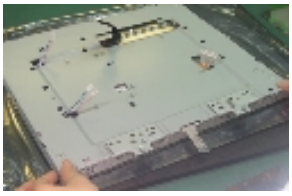
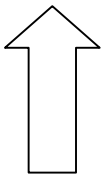
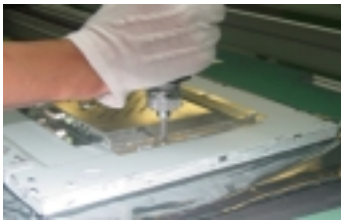
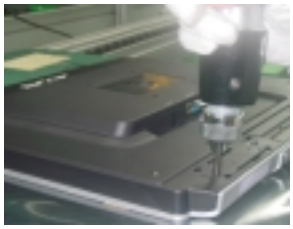
This chapter contains step-by-step procedures on how to assemble the monitor for maintenance and troubleshooting.

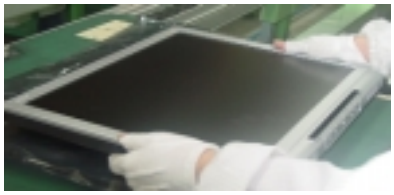
NOTE: **1.**The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

2. Note: The monitor surface is susceptible to scratching!Therefore,lay the monitor on a soft surface when mounting or removing the base.

3.Wear gloves

Picture	description
 	To stick the insulated film on the mainframe and the shield
 1  2	Make preparation before putting the main board: 1、 insert the wiring harness 2、 stick the soft cushion
	To fix the wiring harness with the adhesive plaster

Picture	description
	To put the bezel on panel
	To fix the main frame and panel with the screws
	To connect the main board with inverter board
	To connect all the interfaces of above board
	After having fix the board, cover the shield on them STRENGTH: 
	To fix the shield on the main frame with screws
	To put and fix the rear cover

Picture	Description
	To connect the interfaces
	To cover the panel with front bezel
	To paste protecting film on the panel
The following steps : connect the base with signal cable and bezel	

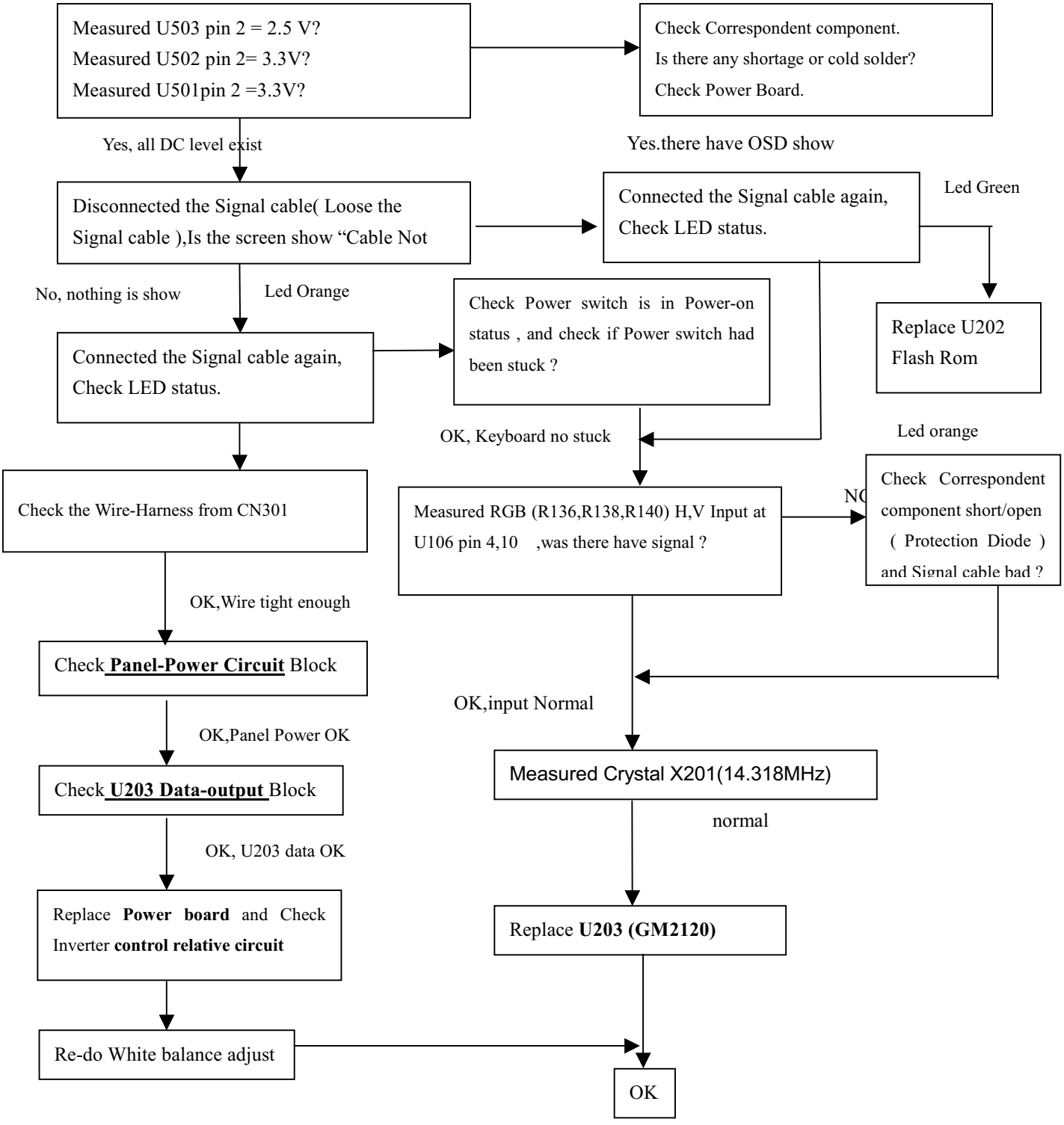
Warning: 1.In order to prevent the static disturbance wear resisting static ring
2. No watch

Troubleshooting

This chapter provides troubleshooting information for the AL1521:

Main Board

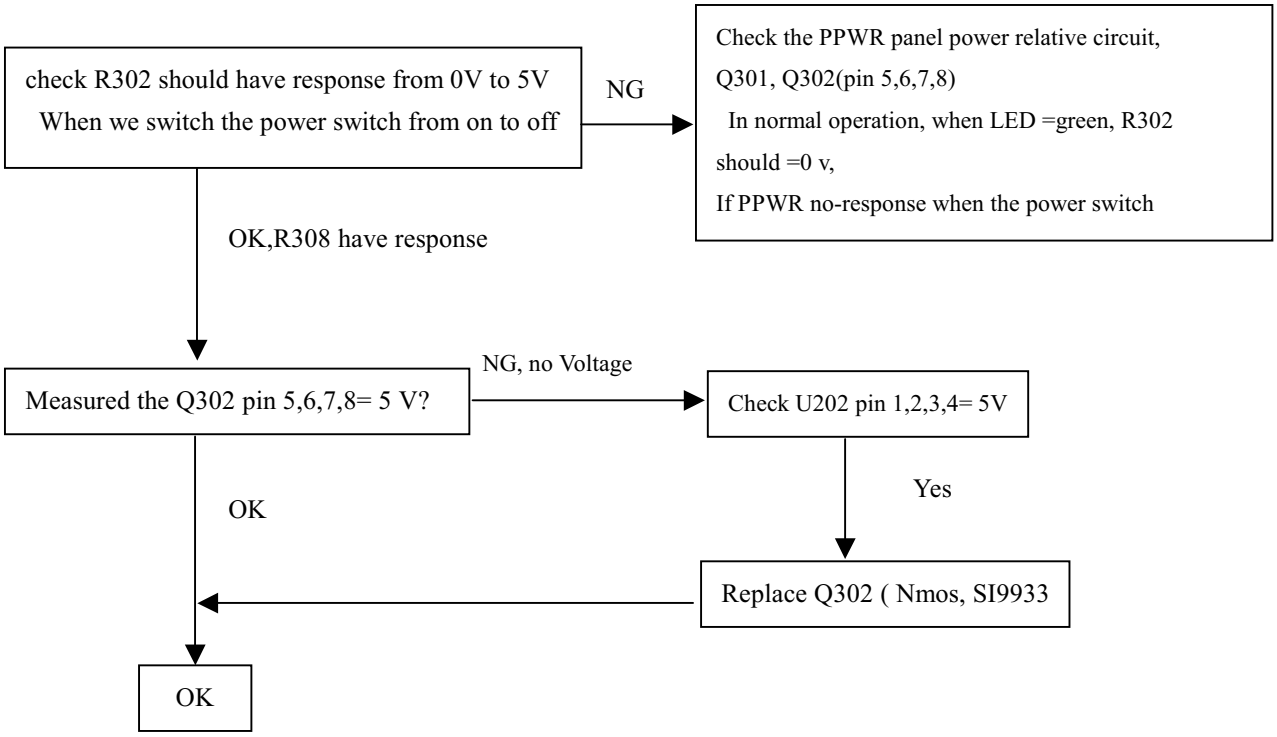
1.NO SCREEN APPEAR



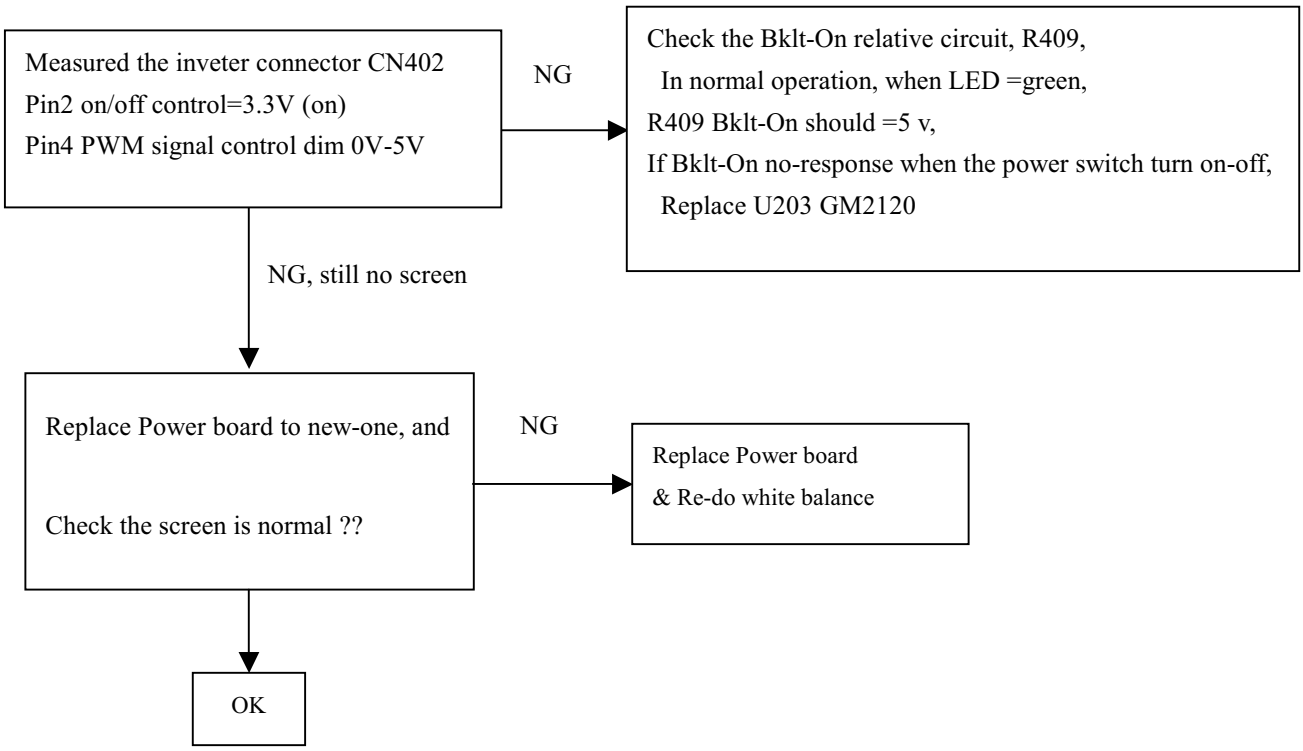
Note: 1. if Replace “**MAIN-BOARD**” , Please re-do “DDC-content” programmed & “WHITE-Balance”.

2. if Replace “**Power Board**” only, Please re-do “ WHITE-Balance”

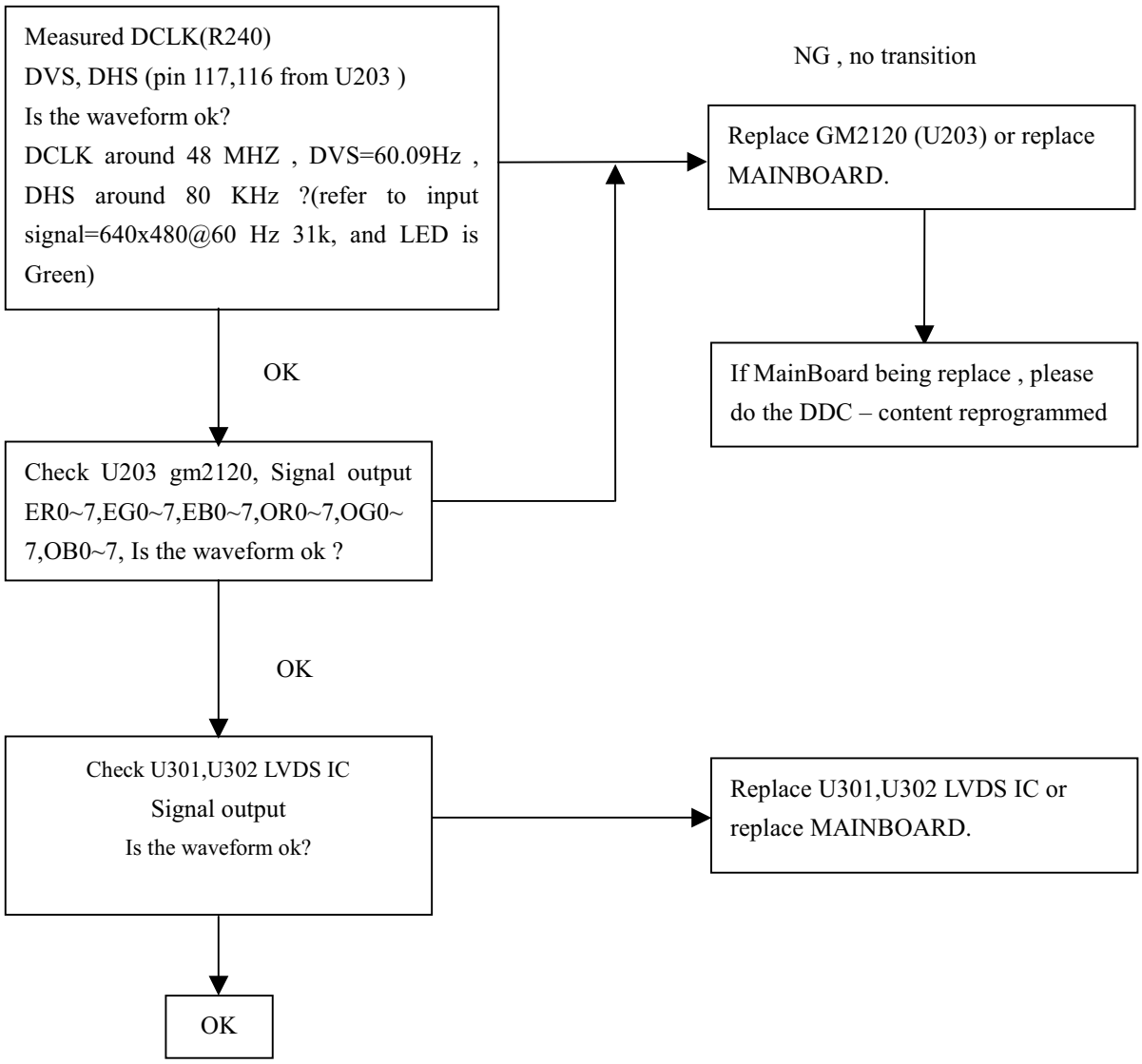
2.PANEL-POWER CIRCUIT



3.INVERTER Control Relative Circuit

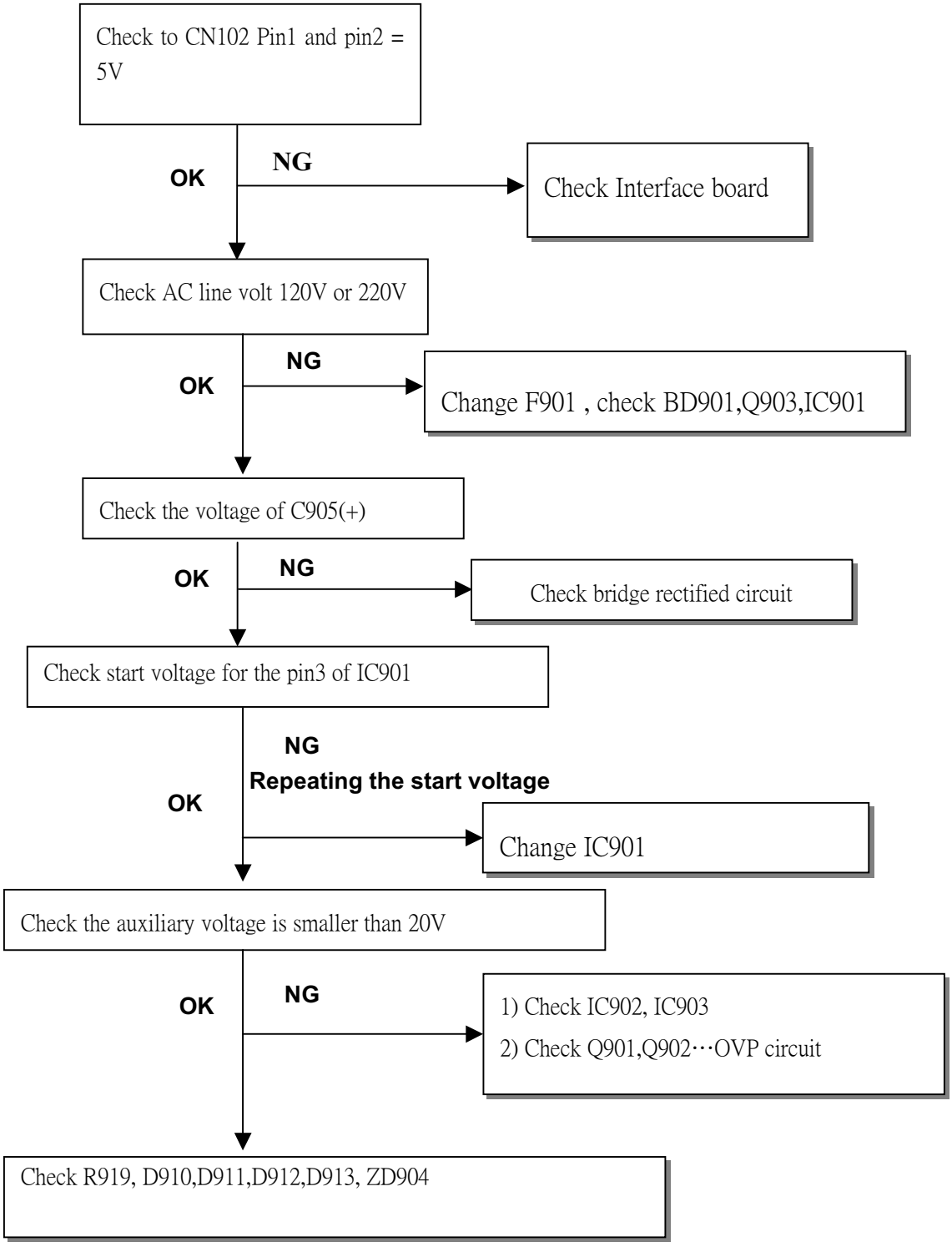


4.U203-DATA OUTPUT

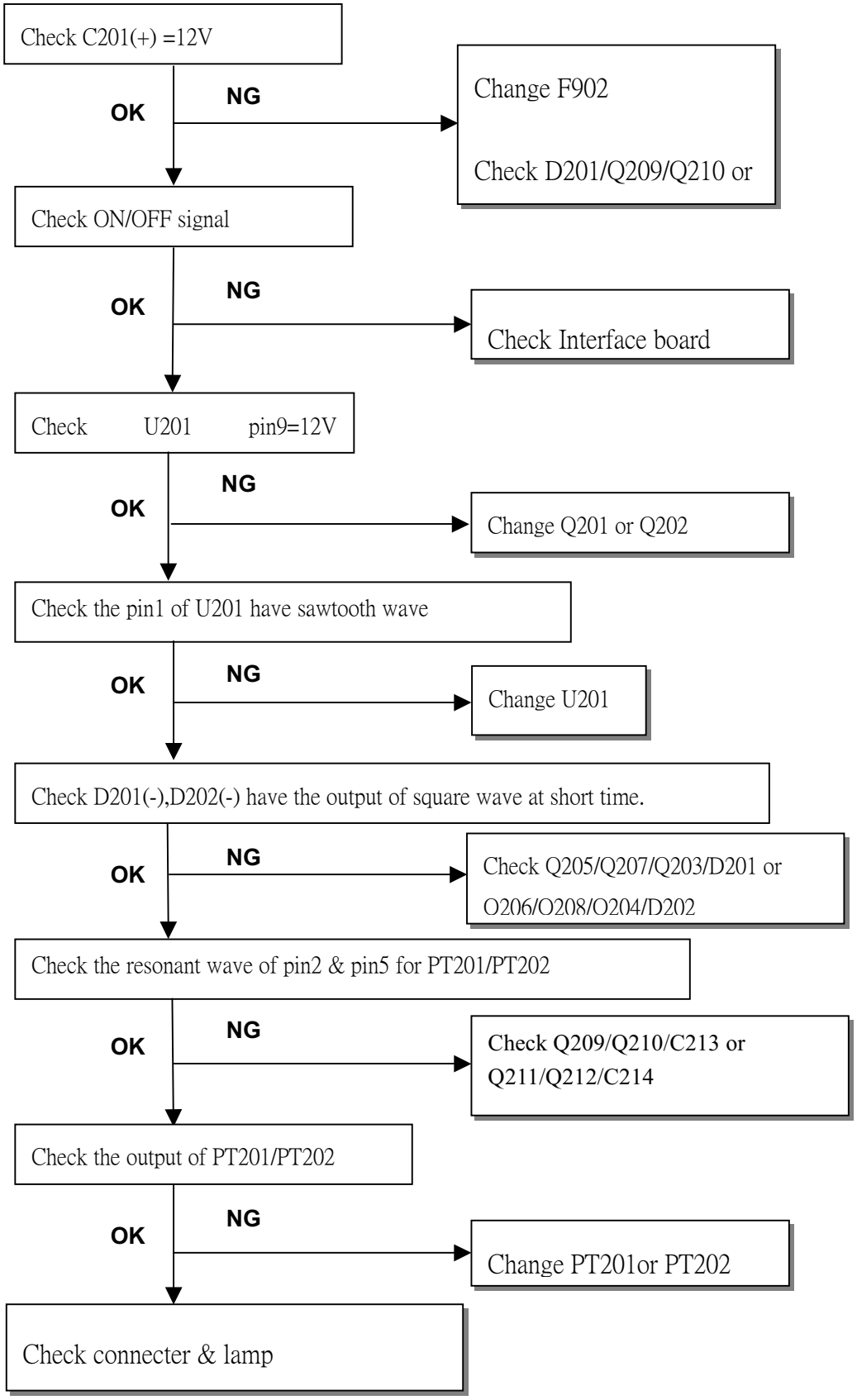


5.Power/Inverter Board

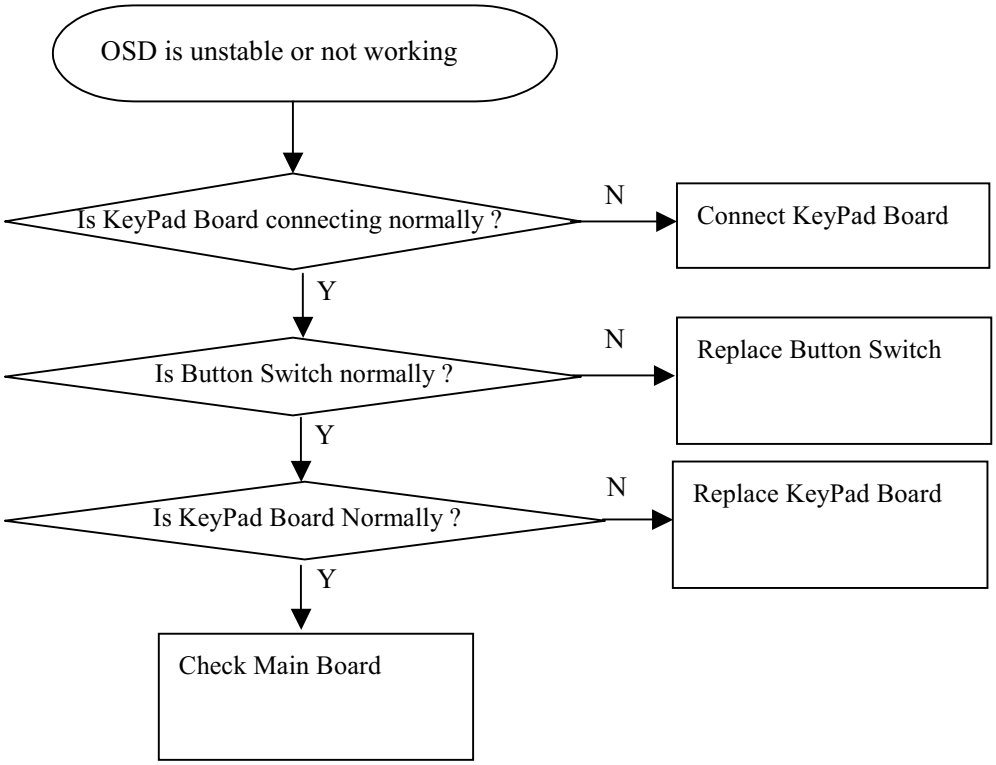
1.) No power



2.) W / LED , No Backlight

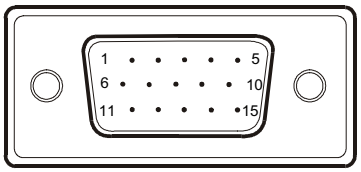


6.KeyPad Board



Connector Information

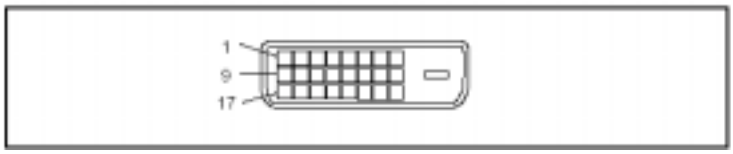
The following figure shows the connector locations on the monitor board:



15 - Pin Color Display Signal Cable(D-sub)

PIN NO.	DESCRIPTION	PI N NO.	DESCRIPTION
1.	Red	9.	NC
2.	Green	10.	Ground
3.	Blue	11.	Ground
4.	Ground	12.	DDC-Serial Data
5.	Ground	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		

24 - Pin Color Display Signal Cable(DVI)



Pin	Meaning	Pin	Meaning
1.	TMDS Data2-	13.	not connected
2.	TMDS Data2+	14.	+5V Power
3.	TMDS Data 2/4 Shield	15.	Ground
4.	not connected	16.	Hot Plug Detect
5.	not connected	17.	TMDS Data0-
6.	DDC Clock	18.	TMDS Data0+
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	Analogue Vertical Sync	20.	not connected
9.	TMDS Data1-	21.	not connected
10.	TMDS Data1+	22.	DDC Clock Shield
11.	TMDS Data 1/3 Shield	23.	DDC Clock+
12.	not connected	24.	DDC Clock-

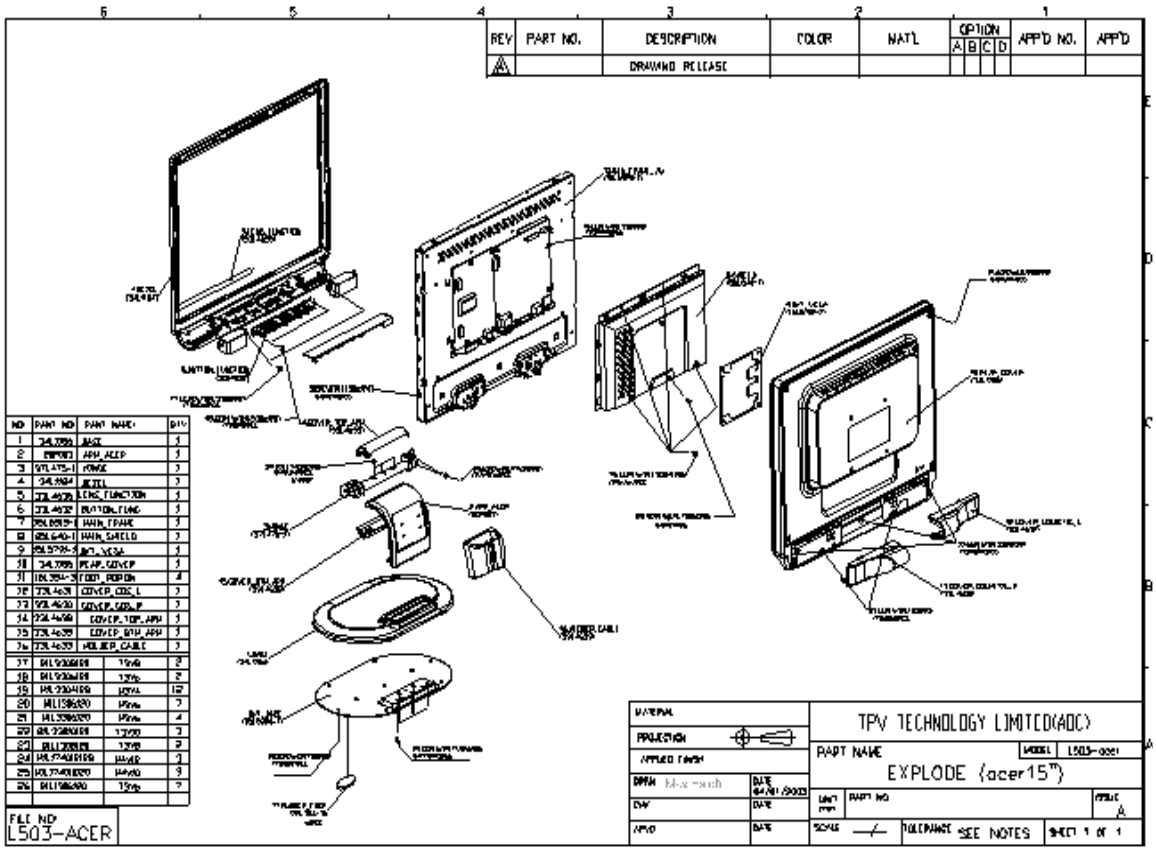
FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AL1521. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

NOTE: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel (http://aicsl.acer.com.tw/spl/). For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.

Exploded Diagram



Part List

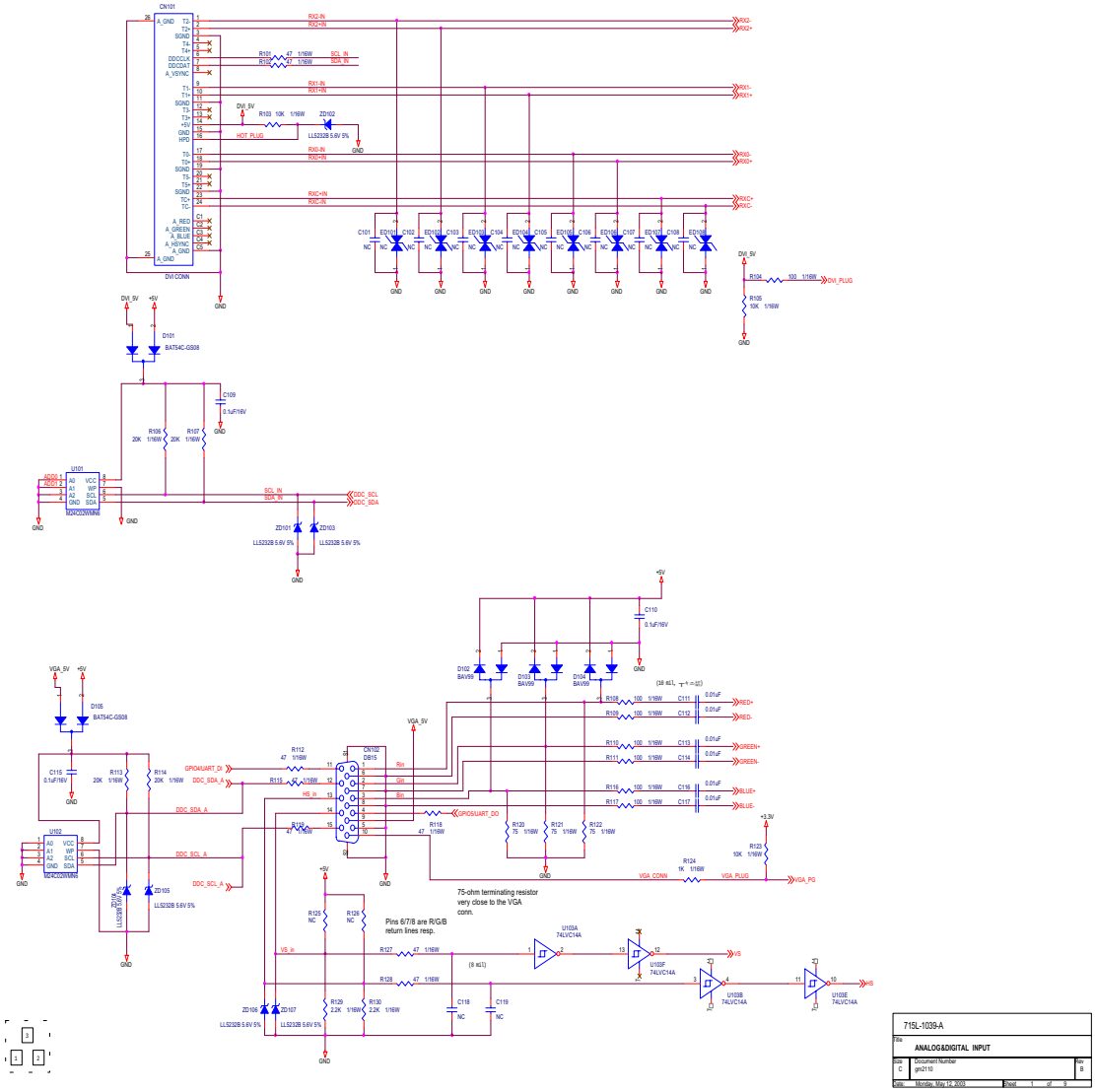
Picture	Partname	Description	Part No.
	FFC CABLE 30P	FFC (AU)	50.L05VB.001
	FPC CABLE 45P	FFC (AU)	50.L05VB.002
	FUNCTION BUTTON BOARD	KEY BOARD PCBA KEY (AU) FOR ACER	55.L05VB.001
	FUNCTION BUTTON CABLE 14PIN FOR AU (FUNCTION BUTTON BOARD TO M/B)	HARNESS (AU)	50.L05VB.003
	D/D-INVERTE BOARD	LCD INVERTER BOARD (AU) BY AOC	55.L05VB.003
	LCD BACK COVER	LCD BACK COVER	60.L05VB.002

Picture	Partname	Description	Part No.
	LCD HINGE COVER (L) AND HIGNE COVER	LCD COVER ASSY	42.L05VB.001
	LCD PANEL 15” AU	AU 15” LCD PANEL	TBD
	MAIN SHIELD	MAIN SHIELD	33.L05VB.001
	MAIN BOARD	FIRMWARE CTRL (AU)	55.L05VB.002
	STAND NECK HOOKING COVER (TOP, BOTTOM)	STAND NECK HOOKING COVER (TOP, BOTTOM)	42.L04VB.002
	BACK LCD BRACKET	BACK LCD BRACKET	60.L05VB.005
	SPEAKER 80HM 1.5W L:5CM (L)	SPEAKER 80HM 1.5W L:5CM	23.L04VB.001

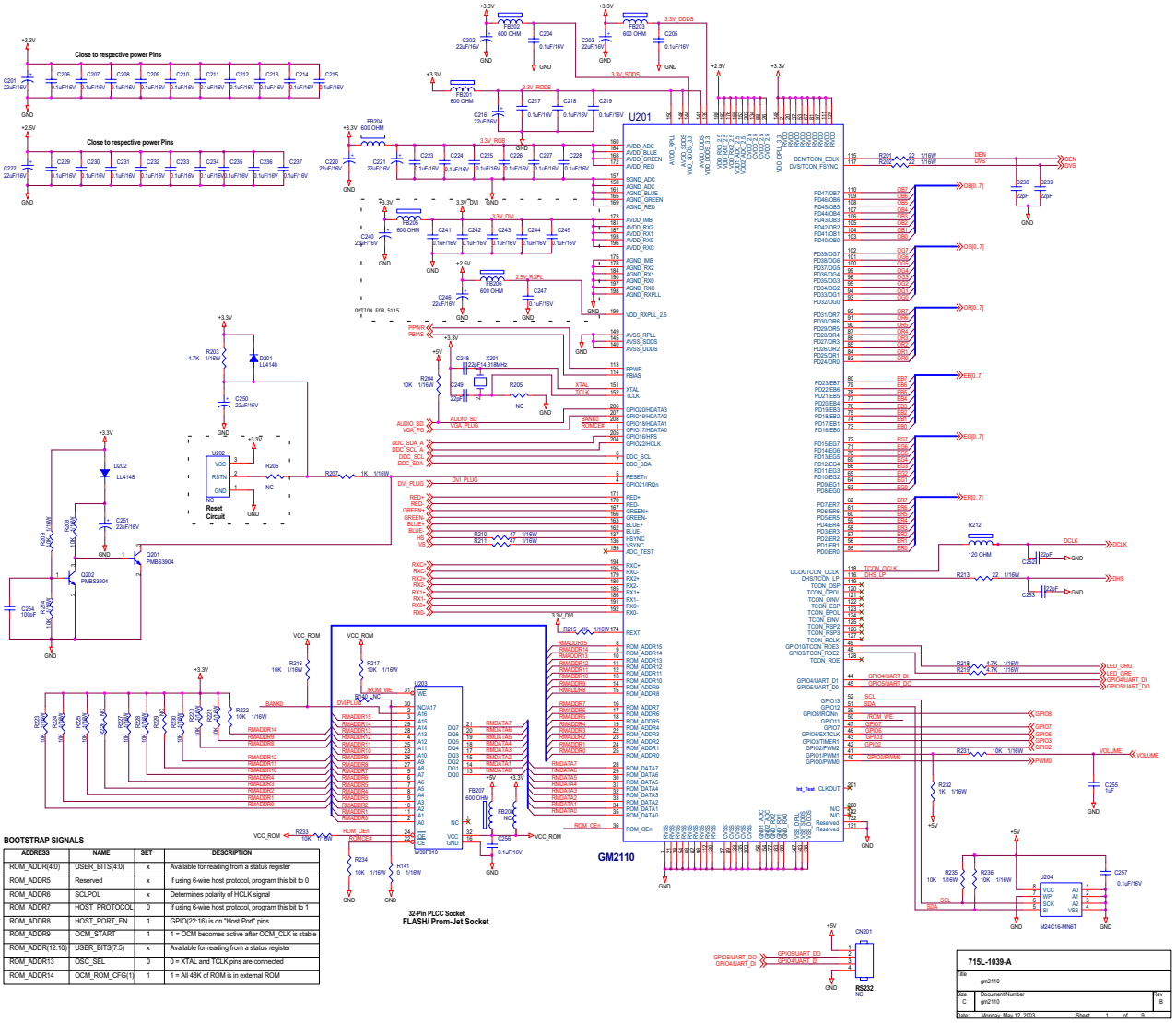
Picture	Partname	Description	Part No.
	SPEAKER 80HM 1.5W L:5CM (R)	SPEAKER 80HM 1.5W L:5CM	23.L04VB.002
	STAND BASE W 4 REBBER FOOTS	STAND BASE W 4 REBBER FOOTS	60.L05VB.003
	STAND MODULE	STAND MODULE	6M.L05VB.001
	STAND NECK	STAND NECK	60.L05VB.004

SCHEMATIC DIAGRAM

DVI and Analog input



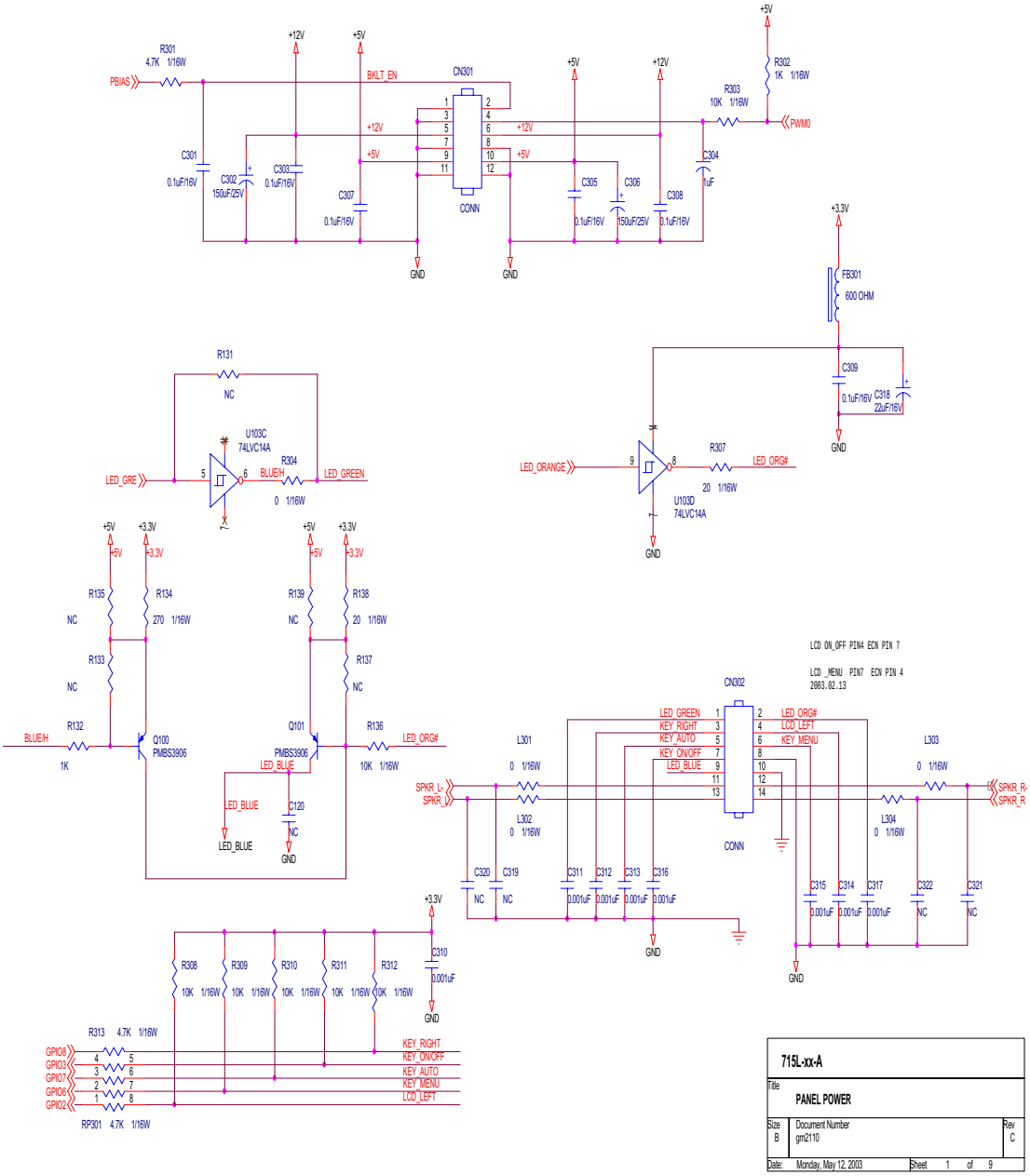
GM5110



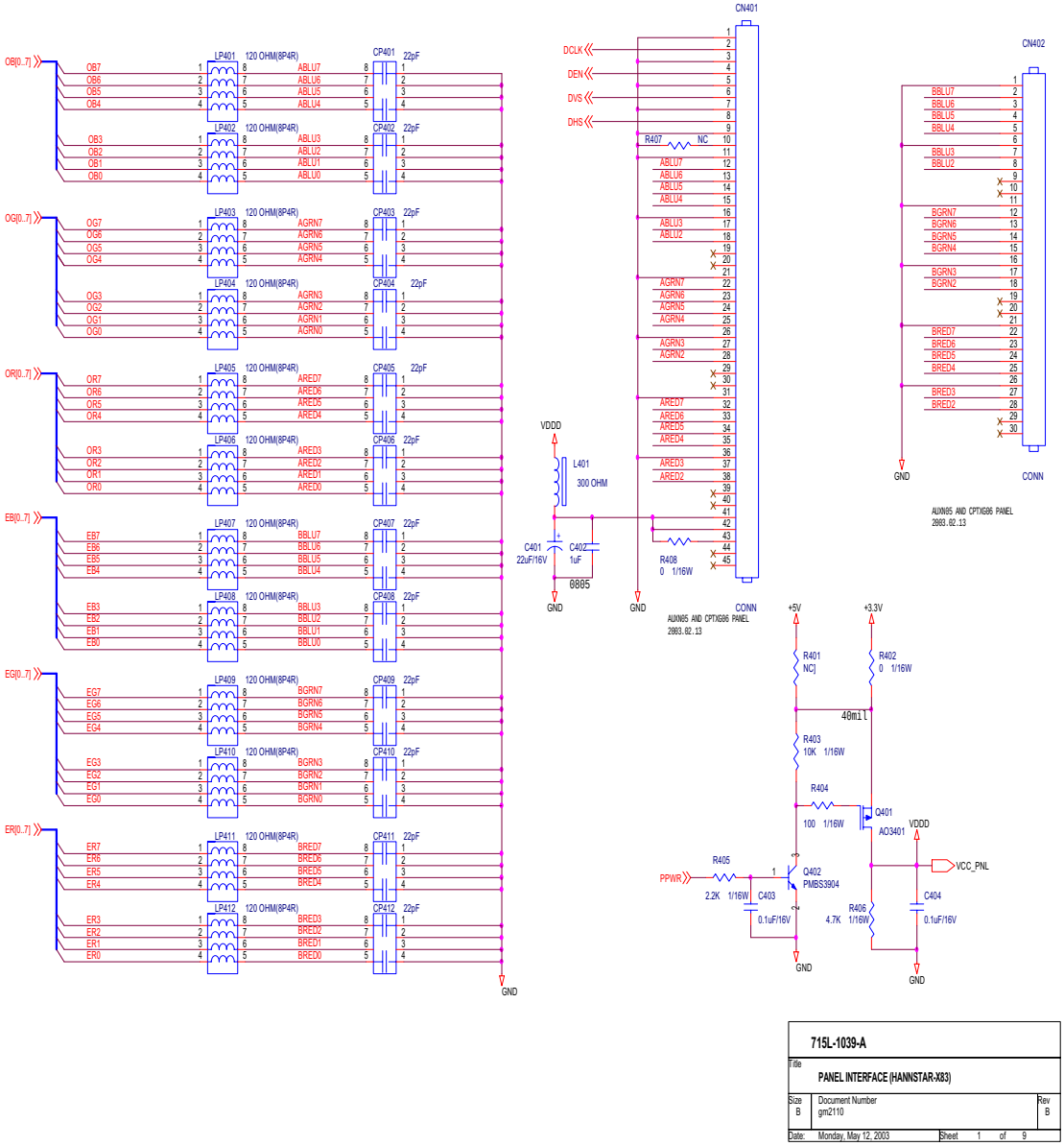
BOOTSTRAP SIGNALS

ADDRESS	NAME	SET	DESCRIPTION
ROM_ADDR(4:0)	USER_BITS(4:0)	x	Available for reading from a status register
ROM_ADDR5	Reserved	x	If using 6-wire host protocol, program this bit to 0
ROM_ADDR6	SCLPOL	x	Determines polarity of HCLK signal
ROM_ADDR7	HOST_PROTOCOL	0	If using 6-wire host protocol, program this bit to 1
ROM_ADDR8	HOST_PORT_EN	1	GPIO(22:16) is on "Host Port" pins
ROM_ADDR9	OCM_START	1	1 = OCM becomes active after OCM_CLK is stable
ROM_ADDR(12:10)	USER_BITS(7:5)	x	Available for reading from a status register
ROM_ADDR13	OSC_SEL	0	0 = XTAL and TCLK pins are connected
ROM_ADDR14	OCM_ROM_CFG(1)	1	1 = All 48K of ROM is in external ROM

Keyboard connector



PANEL INTERFACE



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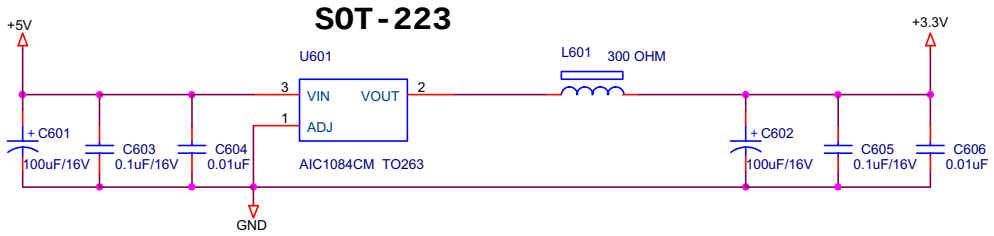
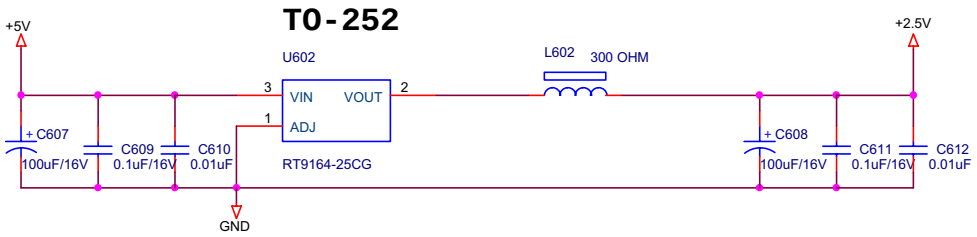
Date: Monday, May 12, 2003	Sheet 1 of 9	

Power



C. 150 uF 25V CHANGE DIP SIZE
7-21



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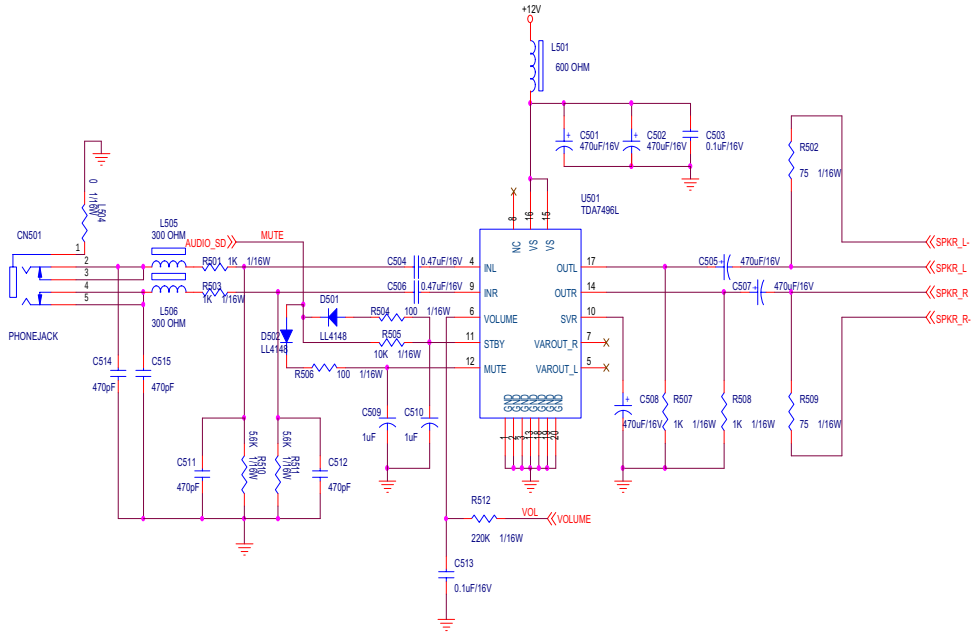
AUDIO



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